

SECURITY FEATURES OF A GENUINE NOTE

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SECURITY FEATURES: TYPES

There are several security features built in our bank notes that deter counterfeiting. Some of these are incorporated in the substrate during papermaking and some in the printing process. These features can be further classified into public recognisable features and machine readable features. Public recognisable features are more effective in early detection and containing the volume of counterfeit notes in circulation.

FEATURES OF GENUINE NOTES

CHARACTERISTICS OF A GENUINE NOTE

- SPECIAL QUALITY PAPER
- PRINTING –TYPE & QUALITY
- SPECIAL (security) INK
- SECURITY FEATURES
 - WATERMARK
 - SECURITY THREAD
 - ADDITIONAL FEATURES

FEATURES OF GENUINE NOTES

- **PAPER**
 - CRISP & CRACKLE
 - OPTICAL FIBRES
 - B & G

FEATURES OF GENUINE NOTES

- **PRINTING**

- DISTINCT & NEAT LINES

- VIVID COLOURS

- OFFSET & INTAGLIO (PORTRAIT, RBI SEAL, GUARANTEE & PROMISORY CLAUSE, ASOKA PILLAR, SIGNATURES)

- SEE-THROUGH (Register) PRINTING

FEATURES OF GENUINE NOTES

INK

- CHEMICAL RESISTANT, LIGHT FAST, WATER/SOAP RESISTANT, QUICK DRYING (Intaglio)
- FLUORESCENT INK (Numbers except 5, Win. Sec. Thread except 5 & Central vertical col. 20+)
- OPTICALLY VARIABLE

FEATURES OF GENUINE NOTES

- **SECURITY FEATURES**

- WATERMARK

- ASHOKA PILLAR OR MAHATMA GANDHI

- SECURITY THREAD

- OLD : THICK LINE
 - 10,20,50 : READABLE, FULLY EMBEDDED
 - RS 100/500/1000: READABLE, WINDOWED IN FRONT, EMBEDDED ON THE BACK
 - THICKNESS OF SECURITY THREAD (10: .5mm, 10+: 1mm)
 - RAINBOW EFFECT - 1000

FEATURES OF GENUINE NOTES

– ADDITIONAL FEATURES

- **LATENT IMAGE** OF THE DENOMINATION (20+)
- **MICRO LETTERING** (10:RBI, 20+: RBI + DENOM)
- **IDENTIFICATION MARK** (FOR DENOMINATION)
- **3D EFFECT** : BACK TOP (scenic) PANEL OF Rs. 100
- **OMRON FEATURE** : F&BACK OF Rs. 500, 1000
- **MULTIDIRECTIONAL LINES** ANTISCAN
- **SECRET WATERMARK** – RBI & DENOMINATION

SECURITY FEATURES

100 RS. NOTE : OBVERSE

Multidirectional lines
(Anti Scan lines)

Watermark

Window Security
Thread
With Clear Text

Micro-Text
(RBI & 100)

Latent Image
(100)

See
Through

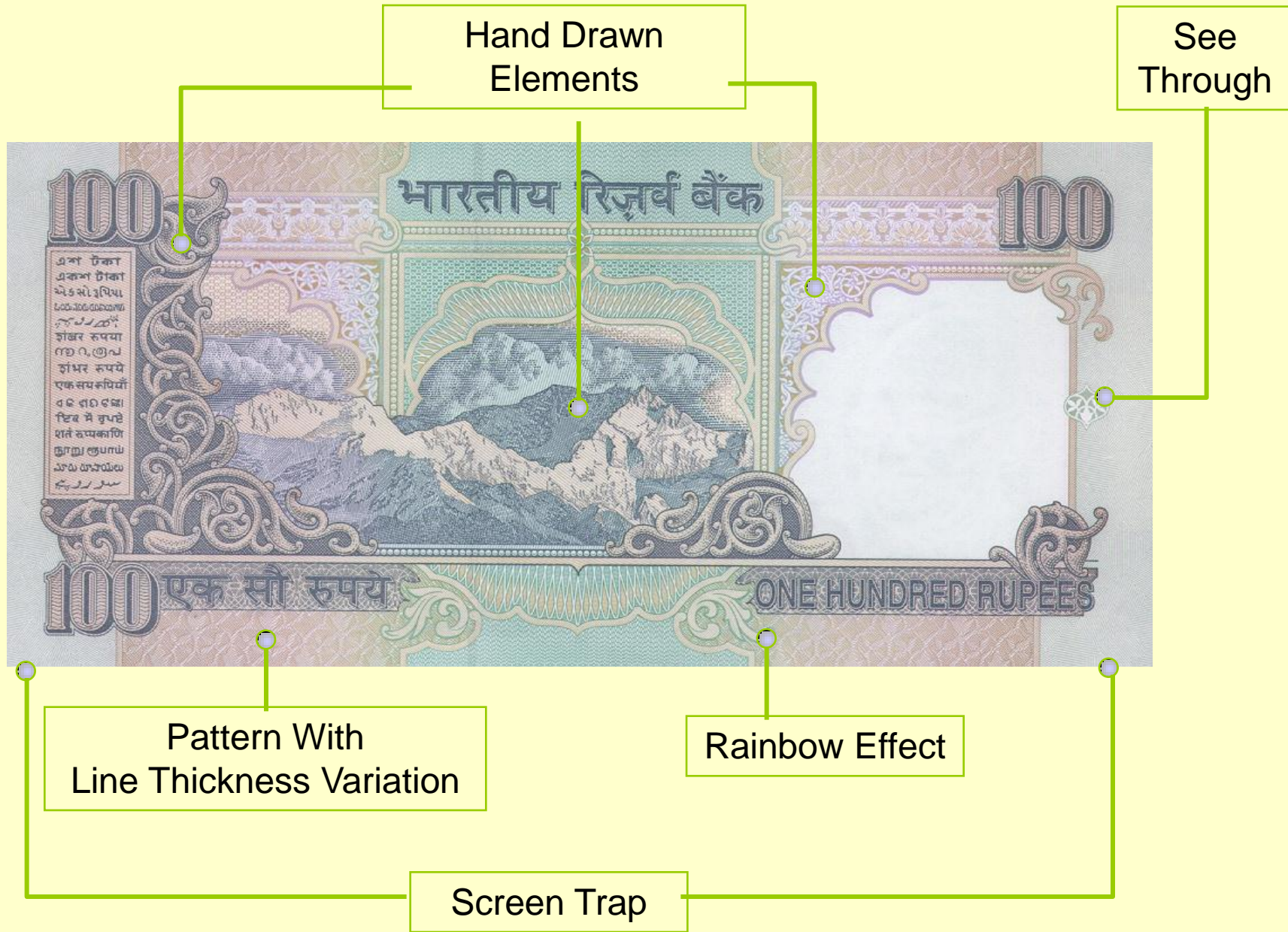


Id Mark

Fluorescent Ink
(Numbering)

Hand Engraved Portrait

100 RS. NOTE : REVERSE



WATERMARK



The watermark in new 100 Rupee Note depicts Mahatma Gandhi.

Visible from both front and back in transmitted light.

Cannot be replicated using scanning or photocopy equipments.



GUA



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SECURITY THREAD



Rs. 100 notes contain a readable windowed security thread. It is partially exposed and partially embedded. When held against light, this thread looks as one continuous line.





The thread is partially exposed & partially embedded



Rs. 100/- contain a readable windowed clear text security thread.

It contains the words "Bharath" in the Devanagari script and "RBI" appearing alternately.



INTAGLIO PRINTING



- The portrait of Mahatma Gandhi, Reserve Bank Seal, guarantee and promise clause, Ashoka pillar emblems on the left, RBI Governor's signature are printed in intaglio i.e., in raised prints

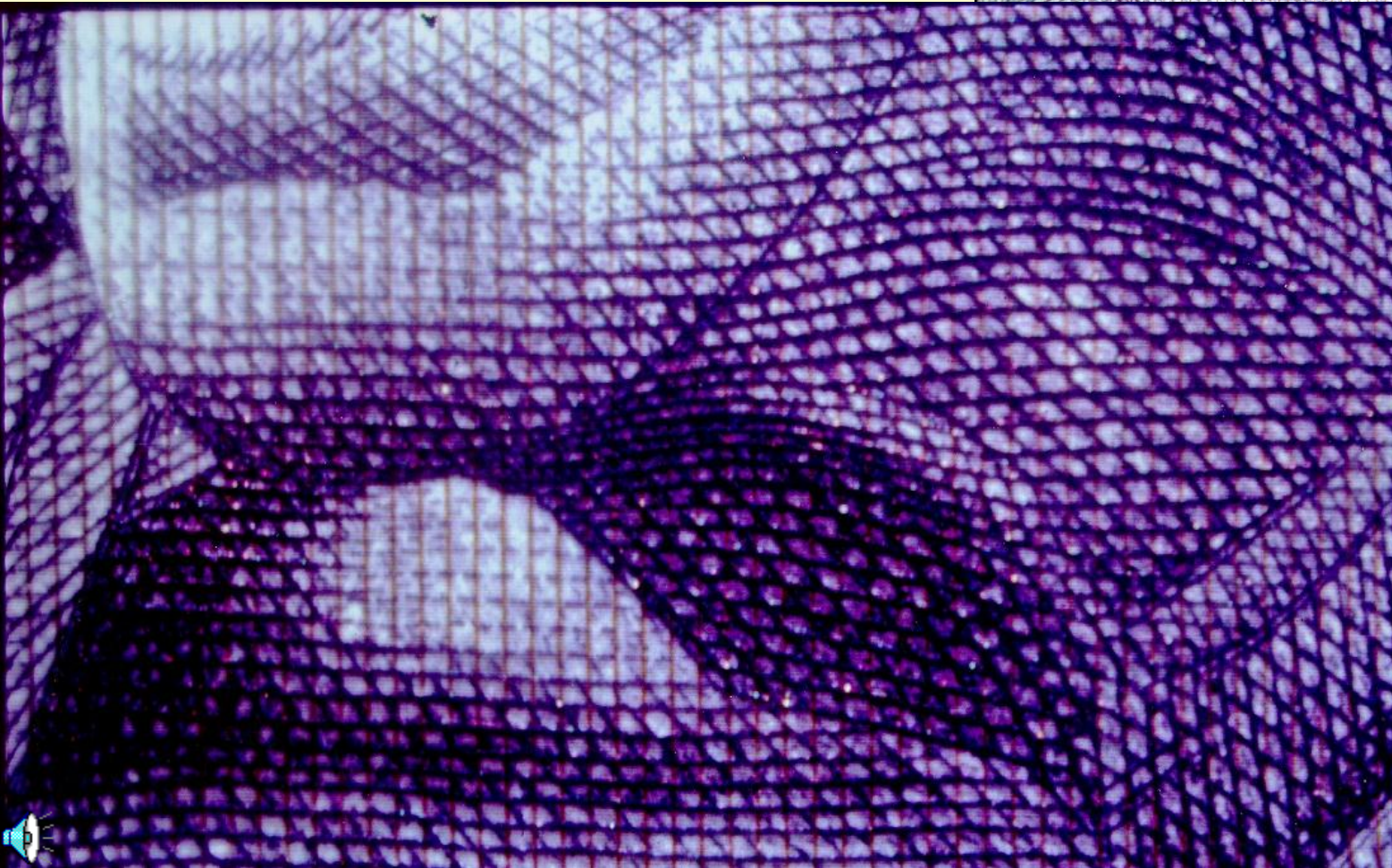




- It appears life like and it stands out distinctly.
- Deep engravings & minute details of the portrait adds to the security of bank notes against counterfeiting



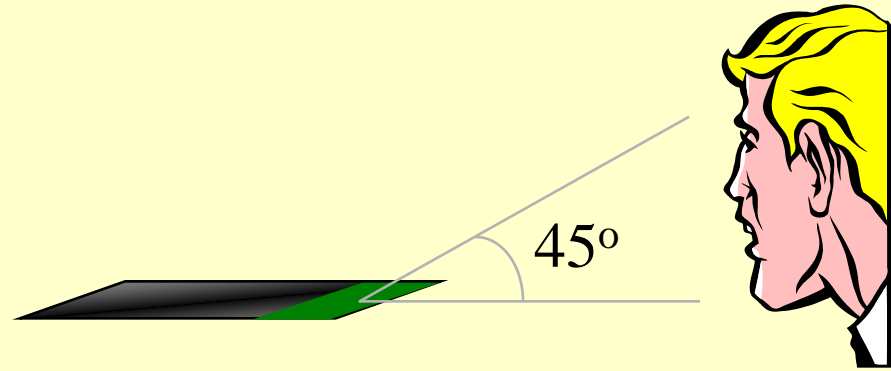
- A counterfeit portrait is usually lifeless & flat and the details merge into the background un like this portrait.



LATENT IMAGE



- The note has latent image.
- Numeral “100” is the latent image which is hidden in the vertical band.
- The latent image “100” cannot be replicated by photocopiers .



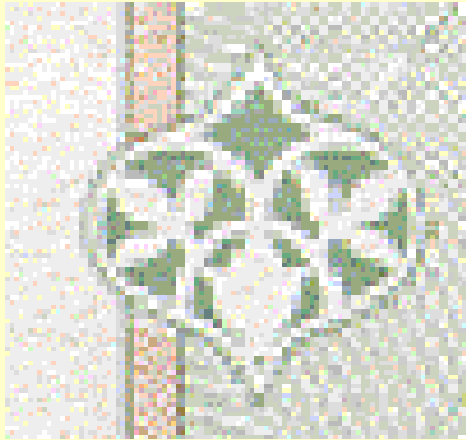
The **LATENT IMAGE**
numeral “**100**” can
be seen when the note
is held and viewed
between 30° to 45°
angle

MICRO-LETTERINGS



- Micro-letting provides additional security to the notes against counterfeiting.
- It appears between the Mahatma Gandhi portrait and vertical band
- Micro-printing “RBI 100” is printed that can be seen using magnifying glass.

See - Through



See-through is a flower like design that renders additional security to our notes.

It is in the left side & above identification mark.

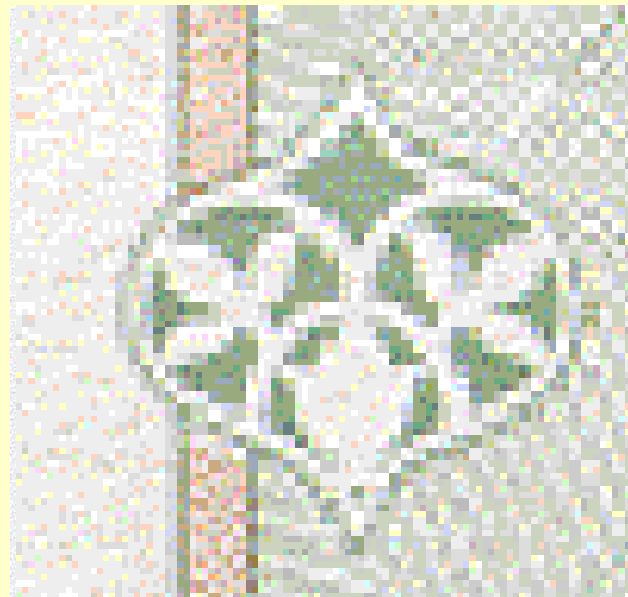
The printing requires perfect registration between front and back.

Replication is difficult on commercial machines.



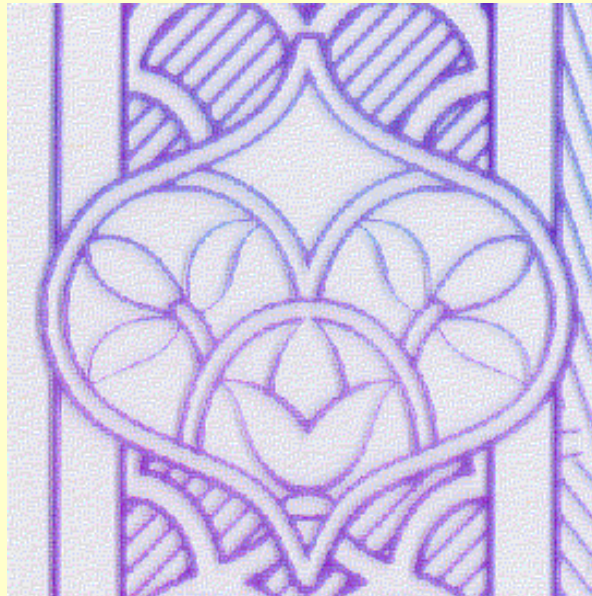
The printing of both front and back is done in a single pass and designs are printed in front & back with perfect registration which renders the note a “see-through” effect.

FRONT
Design



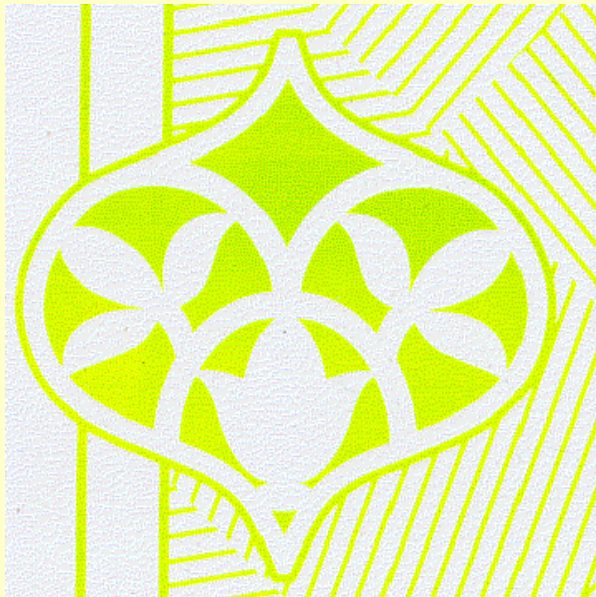
The printing of both front and back is done in a single pass and designs are printed in front & back with perfect registration which renders the note a “see-through” effect.

BACK
Design

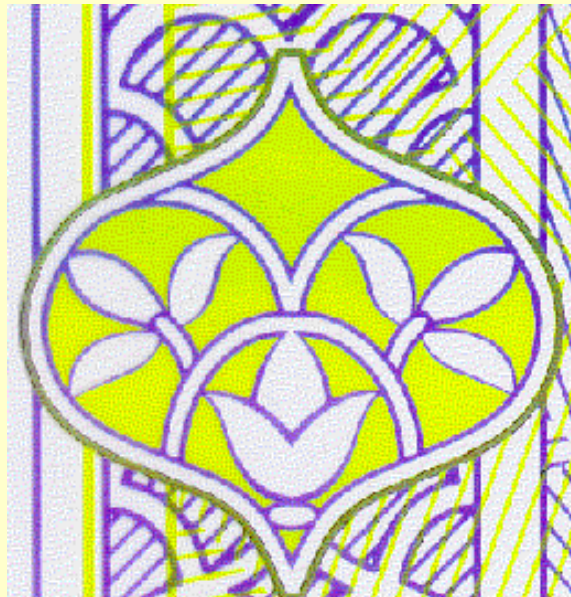


The printing of both front and back is done in a single pass and designs are printed in front & back with perfect registration which renders the note a “see-through” effect.

FRONT
Design



SEE – THROUGH
Design



BACK
Design



IDENTIFICATION MARK



An identification mark has been introduced in the note for visually impaired people.

This mark is in intaglio printing and it is in different geometrical shapes for various denomination.

For Rs. 100–denomination, we have triangle ‘ Δ ’ as the identification mark.



FLUORESCENCE

Number panels of the notes are printed in fluorescent ink

The notes also have fluorescent fibers in the paper.

Both can be seen when the notes are exposed to ultra-violet (UV) lamp.



RS.100 – BACK SIDE

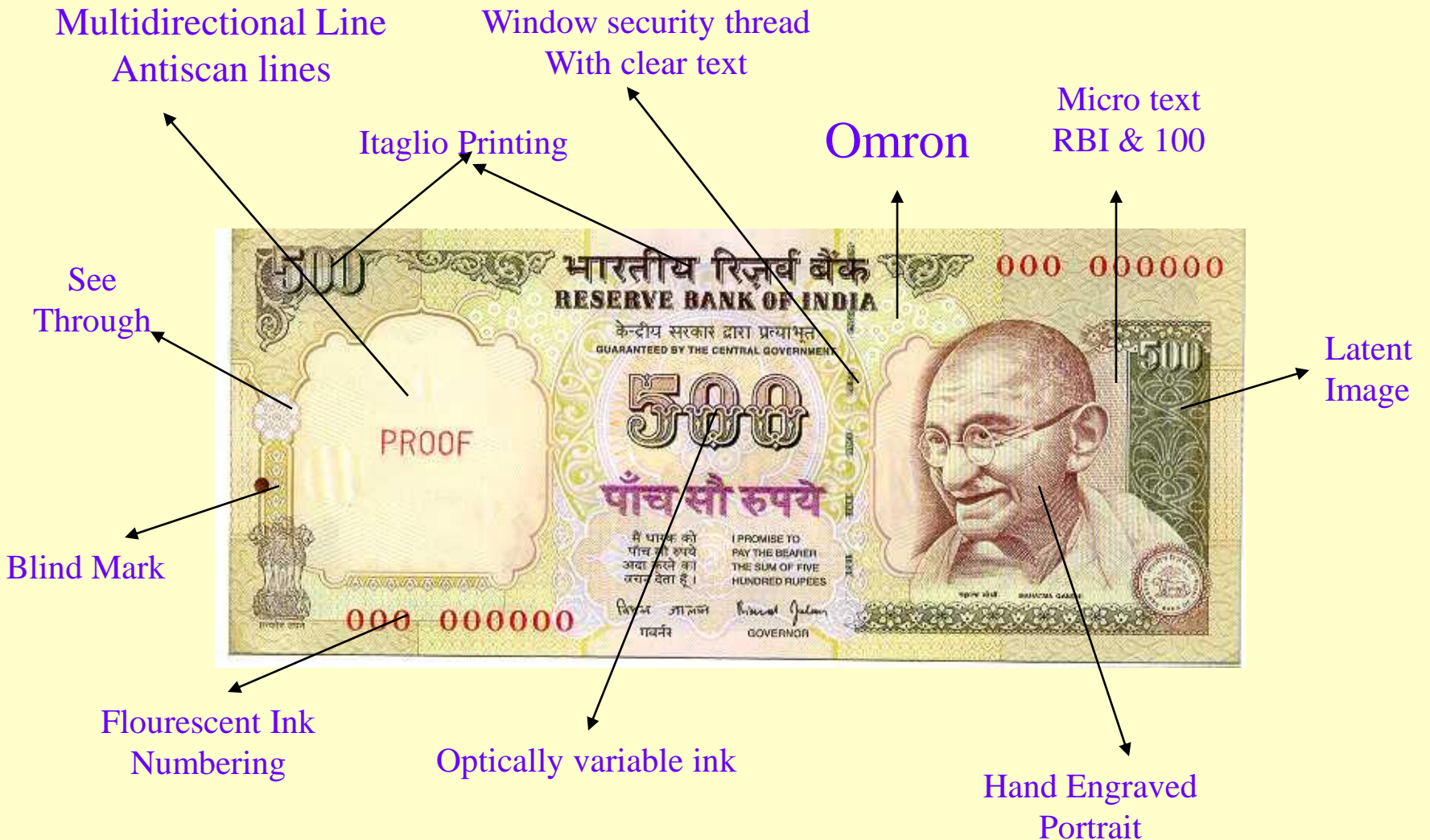
Three Dimensional Design

Water mark Gandhi

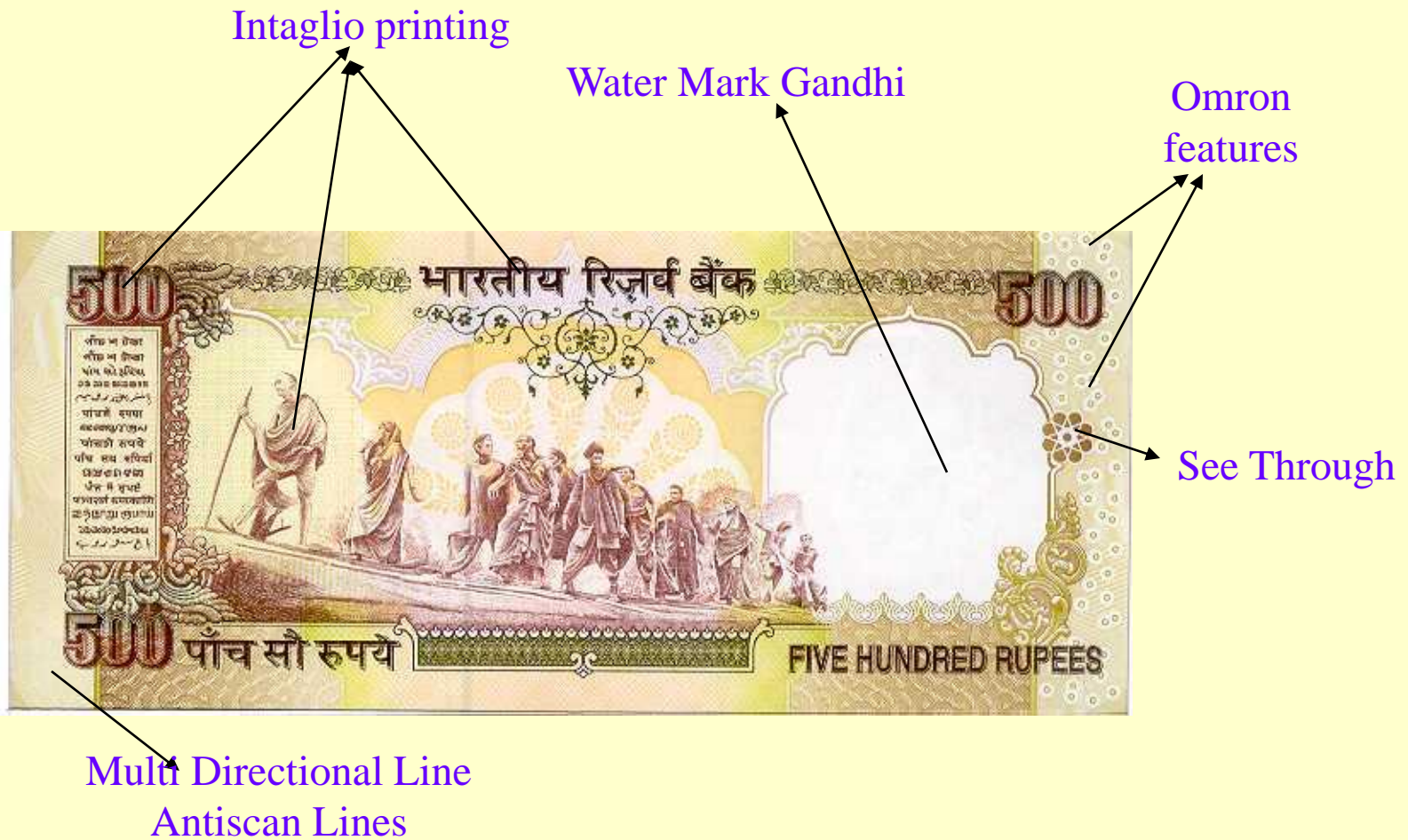


See Through

RS.500/- DENOMINATION BANK NOTE

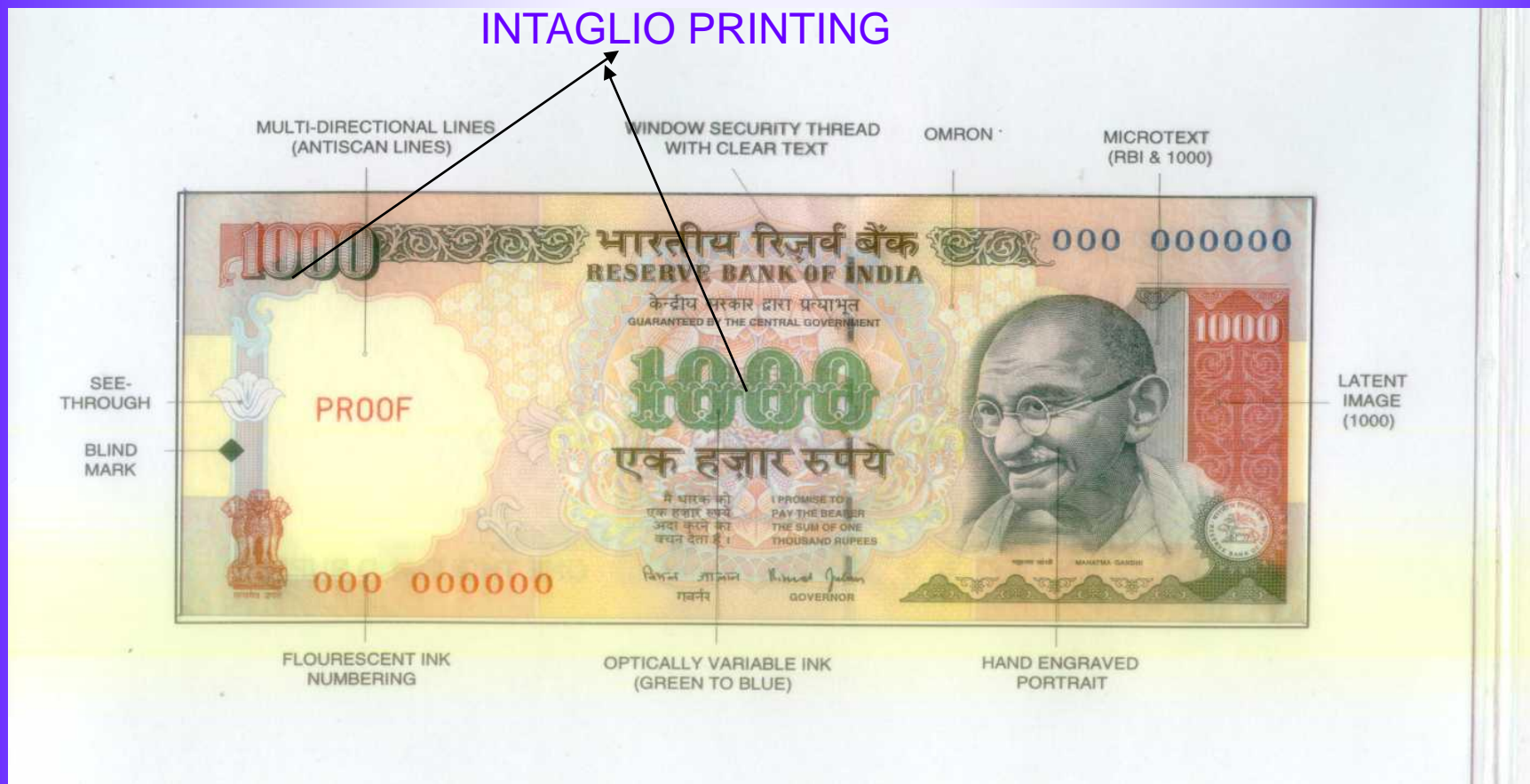


: 2 :



RS.1000/- DENOMINATION BANK NOTE

INTAGLIO PRINTING



: 2 :

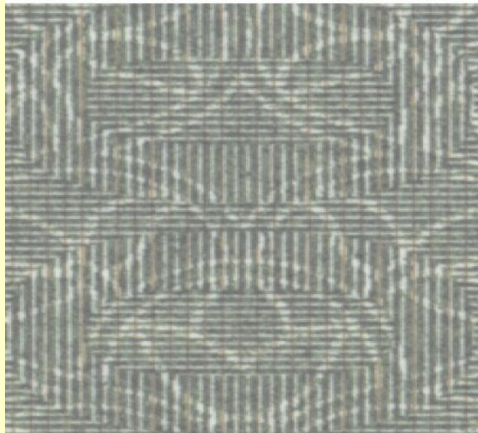




IDENTIFICATION OF GENUINE NOTES

Genuine

Genuine Note



Counterfeit

Note No. 8CN 972809





IDENTIFICATION OF GENUINE NOTES

Genuine

Counterfeit

Genuine Note

Note No. 8CN 972809



- * Intaglio effect is not there.
- * Registration is not perfect.
- * Design lines are not sharp.



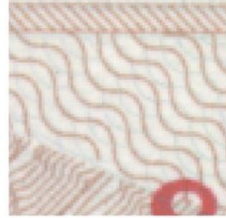
IDENTIFICATION OF GENUINE NOTES

Genuine

Counterfeit

Genuine Note

Note No. 8CN 972809





IDENTIFICATION OF GENUINE NOTES

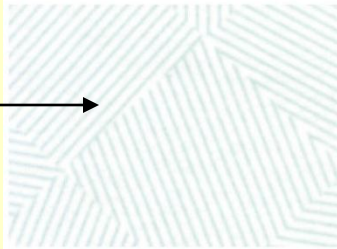
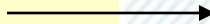
Genuine

Counterfeit

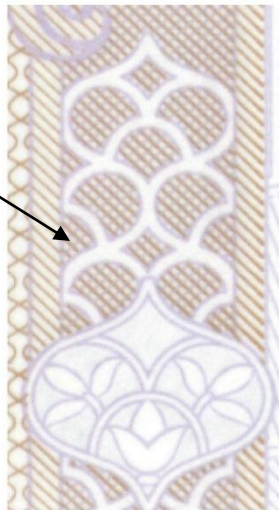
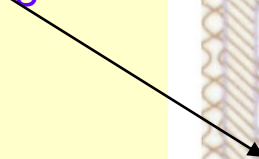
Genuine Note

Note No. 8CN 972809

Multi-directional
Fine lines



See-through



SECURITY FEATURES

- 1. INCORPORATED DURING PAPER MAKING**
- 2. INCORPORATED DURING PRINTING**

SECURITY FEATURES

1. INCORPORATED DURING PAPER MAKING

A. PORTRAIT WATERMARK – ALL

- MOULD MADE
- THREE DIMENSIONAL

B. FLUORESCENT SECURITY THREAD WITH TEXT

- FULLY EMBEDDED – UPTO 50
- WINDOWED – 100+
- MULTI COLOR RAINBOW FLUORESCENT BANDS & MAGNETIC CHARACTER

C. FLUORESCENT COLOR FIBRES RANDOMLY DISTRIBUTED - ALL



W A T E R M A R K

The Mahatma Gandhi Portrait is visible from both front and back in transmitted light. This can not be replicated using scanning or photocopying equipments.

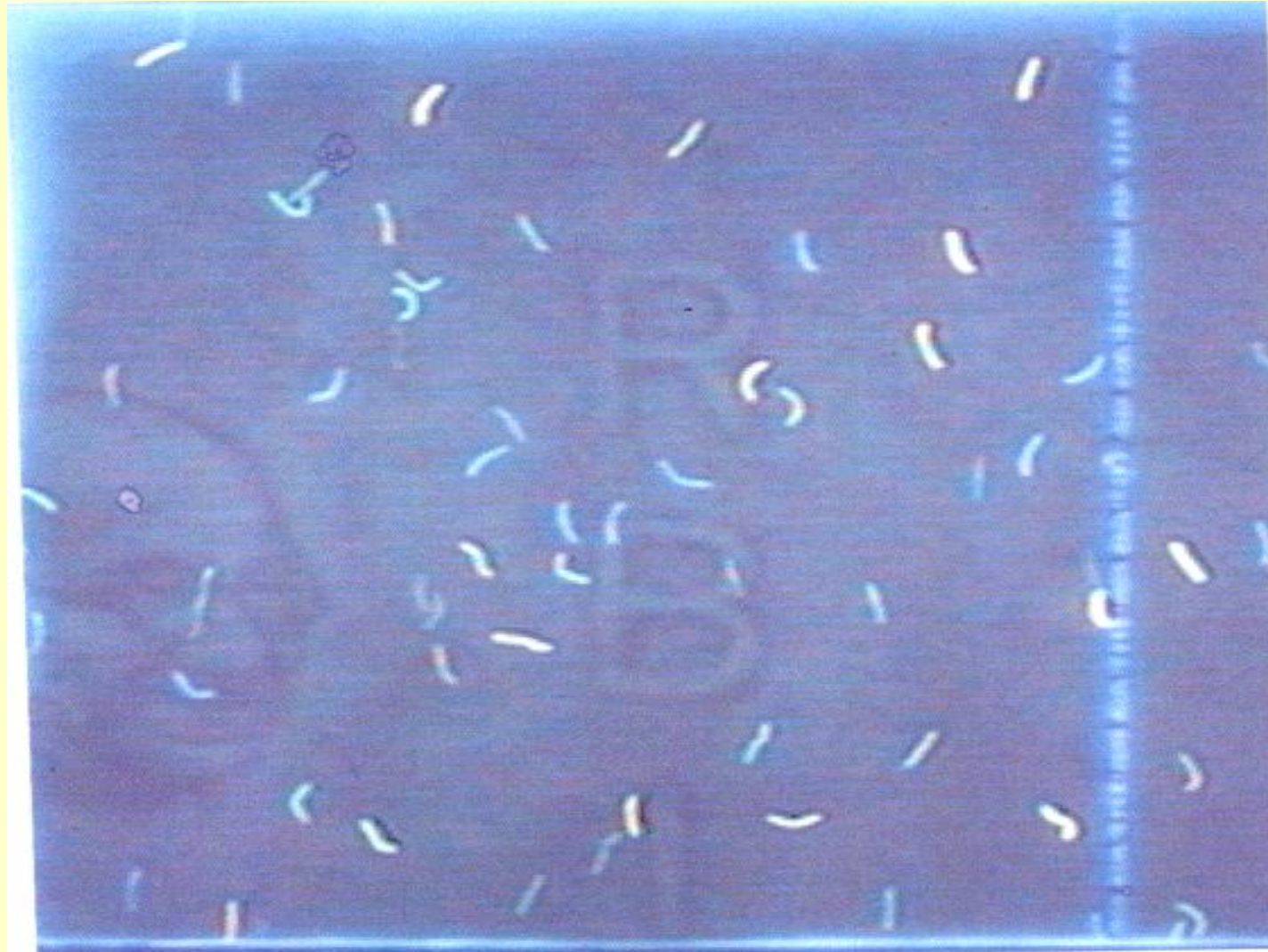


THE THREAD
IS PARTIALLY
EXPOSED &
PARTIALLY
EMBEDDED

SECURITY THREAD

The note carries a readable clear text windowed security thread. It contains the words “Bharat” in Devanagari script and “RBI” appearing alternately.

FLUORESCENT FIBRES IN PAPER



SECURITY FEATURES

2. INCORPORATED DURING PRINTING

A. DESIGN AND CONTENT

1. OFFSET PRINTING
2. INTAGLIO PRINTING

B. NUMBER PANEL

1. LETTER PRESS

SECURITY FEATURES

A. DESIGN AND CONTENT

1. OFFSET PRINTING

OFFSET PRINTING IMPARTS SECURITY BECAUSE OF ANTI COPYING, ANTI SCANNING DESIGNS, SEE THROUGH FEATURES AND INTRICATE DESIGNS DIFFICULT TO REPLICATE.

SECURITY FEATURES

- FEATURES PRINTED WITH OFFSET TECHNIQUE
 - SEE THROUGH (REGISTER) – PR
 - MULTI DIRECTIONAL ANTISCAN LINES – PR
 - RAINBOW PRINTING – PR
 - OMRON ANTI COLOR COPYING - MR

SECURITY FEATURES

- OFFSET PRINTING – PROCESS

FIRST STAGE OF PRINTING – PRE CONDITIONED PAPER

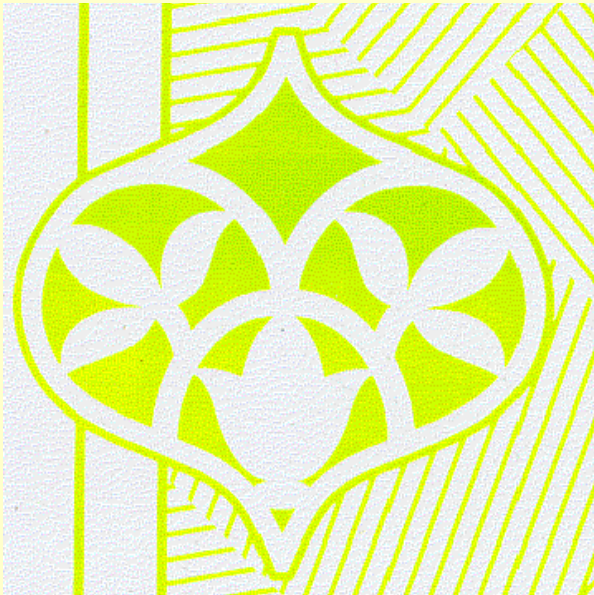
TRANSFER OF IMAGES FROM ALL THE PLATES ON TO THE PAPER
IN ONE PASS SIMULTANEOUSLY ON THE FRONT AND BACK.

CURED FOR THREE DAYS

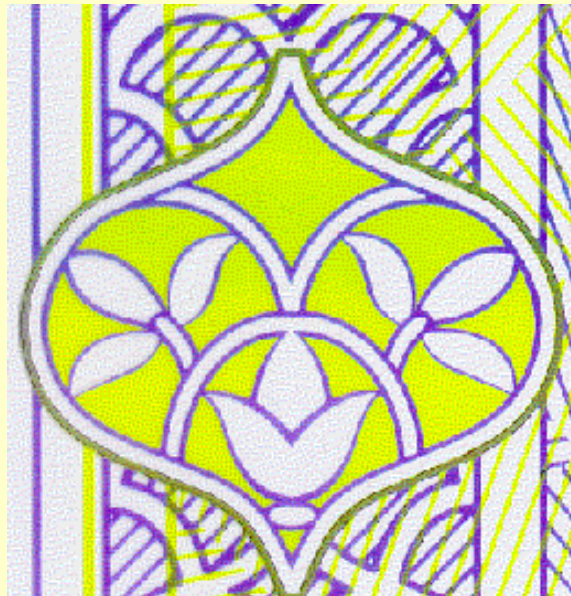
STRICT VISUAL QUALITY CONTROL

THE PRINTING OF BOTH FRONT AND BACK IS DONE IN A SINGLE PASS WITH PERFECT REGISTRATION WHICH RENDERS THE NOTE A “SEE-THROUGH” EFFECT. THIS IS ACHIEVED BY SPLITTING THE CHOSEN DESIGN INTO TWO PARTS AND RENDERING ONE PART ON THE FRONTS AND THE OTHER ON THE BACKS OF THE NOTE.

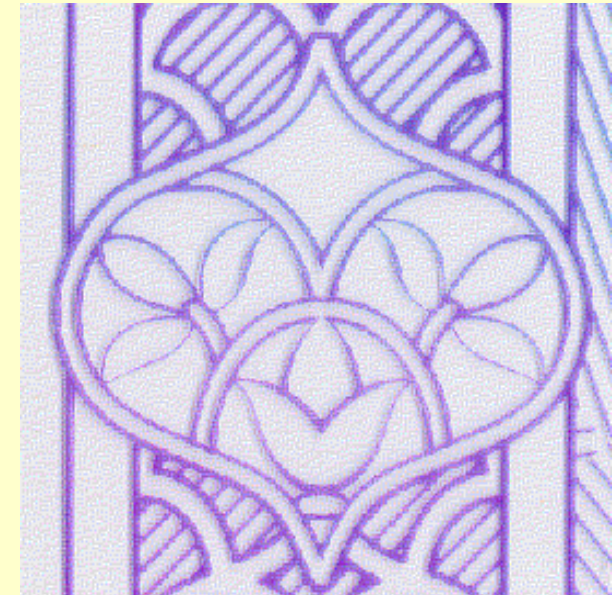
**FRONT
Design**



**SEE – THROUGH
Design**



**BACK
Design**



SECURITY FEATURES

2. INTAGLIO PRINTING

INTAGLIO PRINTING IMPARTS SECURITY BECAUSE OF THE UNIQUE TACTILE EFFECT, LATENT IMAGE AND OTHER FEATURES LIKE OPTICALLY VARIABLE INK

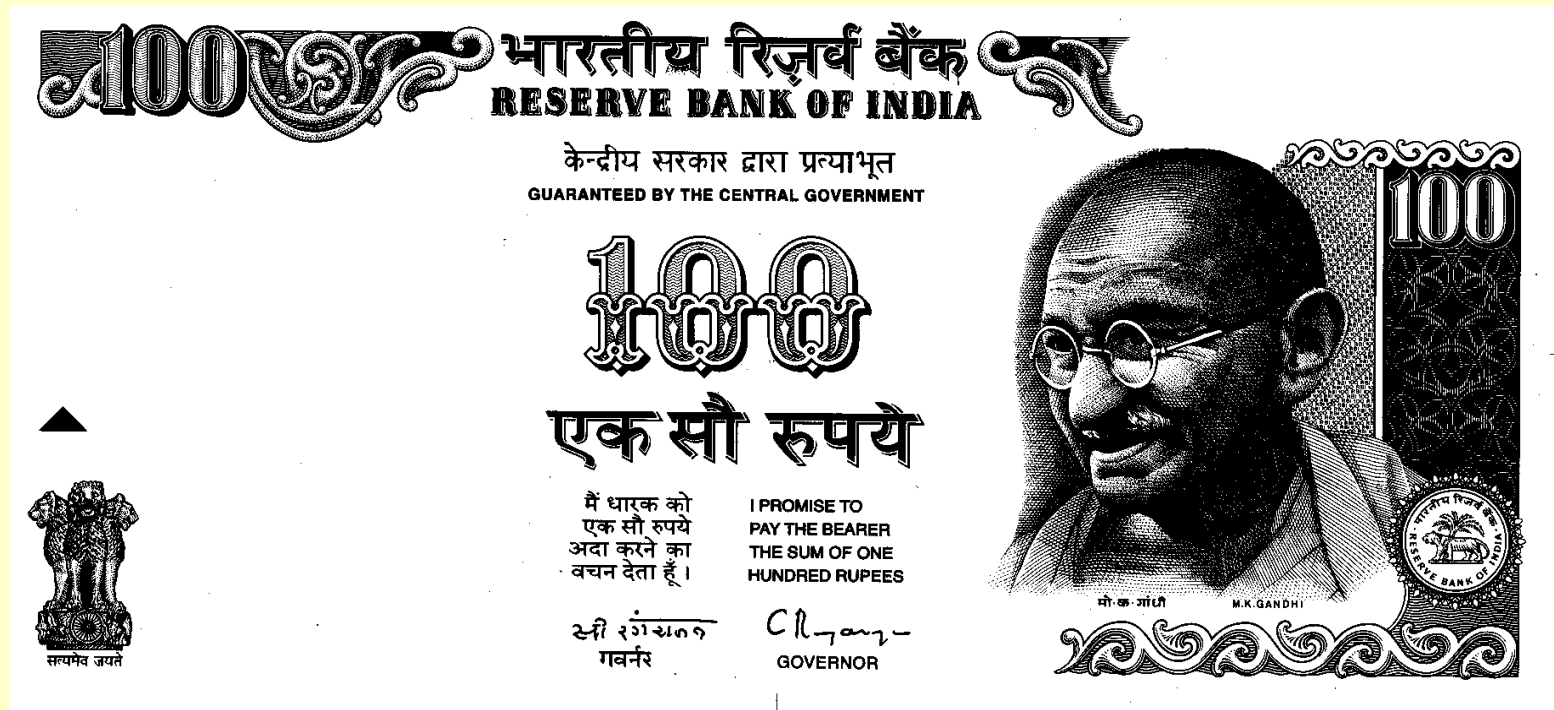
SECURITY FEATURES

- FEATURES IN INTAGLIO PROCESS
 - TACTILE EFFECT – PR
 - LATENT IMAGE – PR
 - HAND ENGRAVED PORTRAIT - PR
 - OVI – PR
- RESULTANT SECURITY FEATURES IN THE NOTE
 - PORTRAIT
 - LATENT IMAGE
 - GUARANTEE CLAUSE, PROMISE CLAUSE, RBI SEAL, SIGNATURE
 - ASOKA PILLAR
 - IDENTIFICATION MARK

SECURITY FEATURES

- **INTAGLIO PRINTING – PROCESS**
 - OFFSET PRINTED SHEETS
 - INK FROM THE RECESSED IMAGE AREAS OF THE PLATE IS TRANSFERRED ONTO THE PAPER UNDER HEAVY PRESSURE LEADING TO UNIQUE TACTILE EFFECT
 - CURED FOR TWO DAYS
 - DIGITAL CAMERA SCANNING & MANUAL EXAMINATION FOR QUALITY CONTROL
 - FOR 500 & 1000, REVERSE IS PRINTED FIRST – CURING FOR 2 DAYS

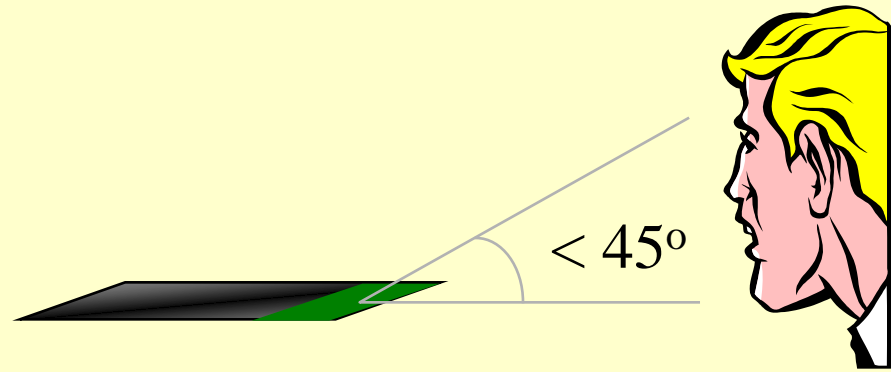
INTAGLIO PRINTED FEATURES



The portrait of Mahatma Gandhi, vertical panel, micro lettering, denomination value, guarantee and promise clause, RBI Governor's signature, Ashoke pillar emblem on the left are printed in intaglio i.e. in raised prints

MICRO LETTERING





The numeral “**100**”
can be seen as
LATENT IMAGE when
the note is held at and
viewed between 30° to
 45° angle

NEW SECURITY FEATURES

- **OBJECTIVES**

- DETERRENCE TO COUNTERFEITING
- HELP PUBLIC IN IDENTIFYING A GENUINE NOTE
- FACILITATE HANDLING AT THE BANKS

NEW SECURITY FEATURES

- **MODIFICATIONS**

- **PAPER SPECIFICATIONS**

- GRAMMAGE – 90 GSM
- CALIPER THICKNESS – 110 Microns

- **OMRON** – TO BE INCLUDED IN 50 & 100 AS WELL

- **OVI**

- REDUCED FONT SIZE OF NUMERALS

- **INTAGLIO PRINTING**

- BETTER EFFECT - 130 MICRON
- NONE ON REVERSE

NEW SECURITY FEATURES

- **MODIFICATIONS**

- **IDENTIFICATION MARK**

- ENGRAVING DEPTH TO BE INCREASED 83 160 MICRONS

- **OPTICAL FIBRES – DUAL COLOR**

- **REGISTER OF THE NOTE – IMPROVEMENT**

- FLORAL DESIGN REPLACED WITH DENOMINATION

NEW SECURITY FEATURES

- **MODIFICATIONS**

- **SECURITY THREAD**

- WINDOWED
- MACHINE READABLE
- DEMETALISED CLEAR TEXT
- MAGNETIC
- RBI, BHARAT (100 & 500) ADDITIONAL 1000 (1000)
- OVI (GREEN TO BLUE)
- FLUORESCENCE
 - TEXT UNDER UV LIGHT
 - YELLOW ON REVERSE
- WIDER – 3 MM (500, 1000), 2 MM (100), 1.4 MM (50)

SECURITY THREAD

	50	100	500	1000
Windowed	✓	✓	✓	✓
Machine Readable	✓	✓	✓	✓
Demetalised	✓	✓	✓	✓
Clean text	✓	✓	✓	✓
Magnetic	✓	✓	✓	✓
Bharat, RBI	✓	✓	✓	✓
Denomination	✗	✗	✗	✓
OVI	✗	✓	✓	✓
Fluorescent (Front) (UV)	Yellow	Text(UV)	Text(UV)	✓
Fluorescence- Back	Yellow	Yellow	Yellow	✓
WIDTH (MM)	1.4	2	3	3

NEW SECURITY FEATURES

- **NO CHANGE IN**
 - WATERMARK, SECRET WATERMARK
 - LATENT IMAGE – IMPROVEMENT
 - MICRO LETTERING
 - FLUORESCENCE

NEW SECURITY FEATURES

- **NEW FEATURES**
 - **ELECTROLYTE WATERMARK**
 - OF DENOMINATION
 - WITHIN THE WM WINDOW
 - **YEAR OF PRINT** – ON THE REVERSE

50

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA

000 000000

केन्द्रीय सरकार द्वारा प्रत्याश्रित
GUARANTEED BY THE CENTRAL GOVERNMENT

50

50

SPECIMEN

पचास रुपये

मैं धारक को
पचास रुपये
अदा करने का
वचन देता हूँ।

I PROMISE TO
PAY THE BEARER
THE SUM OF
FIFTY RUPEES



महान्यास महात्मा MAHATMA GANDHI



सत्यमेव जयते

000 000000

डा. वी. रेड्डी
गवर्नर

V. V. Reddy
GOVERNOR

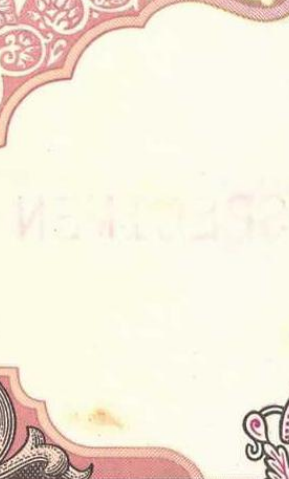


50

भारतीय रिज़र्व बैंक

50

अध्याय टिका
अध्याय टिका
पचास रुपिया
பாதுபது ரூபாய்
पन्नास रुपया
അമ്പത്തു രൂപ
पन्नास रुपये
पचास रुपिया
பாதுபது ரூபாய்
پچاس روپے
पन्नास रुपया
അമ്പത്തു രൂപ
پچاس روپے



50

पचास रुपये

FIFTY RUPEES

2005



₹100

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA

000 000000

केन्द्रीय सरकार द्वारा प्रत्याभूत
GUARANTEED BY THE CENTRAL GOVERNMENT

100
१००

एक सौ रुपये

मैं धारक को
एक सौ रुपये
अदा करने का
वचन देता हूँ।

I PROMISE TO
PAY THE BEARER
THE SUM OF ONE
HUNDRED RUPEES

कावे रेड्डी
गवर्नर

Umeddy
GOVERNOR



महात्मा गांधी MAHATMA GANDHI



100

SPECIMEN



सत्यमेव जयते

000 000000

500

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA

000 000000

केन्द्रीय सरकार द्वारा प्रत्याभूत
GUARANTEED BY THE CENTRAL GOVERNMENT

500

SPECIMEN

पाँच सौ रुपये

मैं धारक को
पाँच सौ रुपये
अदा करने का
वचन देता हूँ।

I PROMISE TO
PAY THE BEARER
THE SUM OF FIVE
HUNDRED RUPEES

आ. वे. रेड्डी
गवर्नर

Umeddy
GOVERNOR



महात्मा गांधी MAHATMA GANDHI



सत्यमेव जयते

000 000000

500



500

भारतीय रिज़र्व बैंक

500

पाँच सौ रुपया
 पाँच सौ रुपिया
 05 00 000000
 پانچ سو روپيا
 पाँचसौ रुपया
 0000000000
 पाँचसौ रुपये
 पाँच सय रुपिया
 0000000000
 पाँच सै रुपये
 पञ्चसतं रुपयकाणि
 0000000000
 پانچ سوي



500

पाँच सौ रुपये

FIVE HUNDRED RUPEES

2005

1000

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA

000 000000

केन्द्रीय सरकार द्वारा प्रत्याभूत
GUARANTEED BY THE CENTRAL GOVERNMENT

SPECIMEN

1000

एक हजार रुपये

मैं धारक को
एक हजार रुपये
अदा करने का
वचन देता हूँ।

I PROMISE TO
PAY THE BEARER
THE SUM OF ONE
THOUSAND RUPEES

डा. वी. वेङ्कट
गवर्नर

Umeddy
GOVERNOR



1000



महात्मा गान्धी MAHATMA GANDHI



सत्यमेव जयते

000 000000

1000

এ হাজার টকা
এক হাজাৰ টকা
એક હજાર રૂપિયા
2005 2005 2005000000
ایک ہزار روپے
एक हजार रुपया
ആയിരം രൂപ
एक हजार रुपये
एक हज़ार रुपियाँ
এক হাজাৰ টকা
ਇਕ ਹਜ਼ਾਰ ਰੁਪਏ
सहस्ररुप्यकारिण
ಸುಹಸ್ರಮು ಅನುಭವ
ایک ہزار روپے

भारतीय रिज़र्व बैंक

1000



1000

एक हज़ार रुपये

ONE THOUSAND RUPEES

2005